

# EUROPEAN PATENT OFFICE

## Pat nt Abstracts of Japan

PUBLICATION NUMBER : 11011917  
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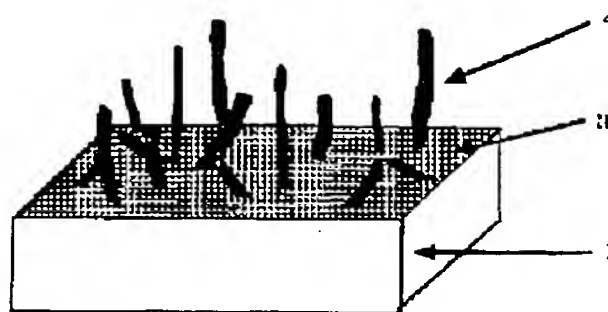
APPLICATION DATE : 18-06-97  
APPLICATION NUMBER : 09161292

APPLICANT : CANON INC;

INVENTOR : DEN TORU;

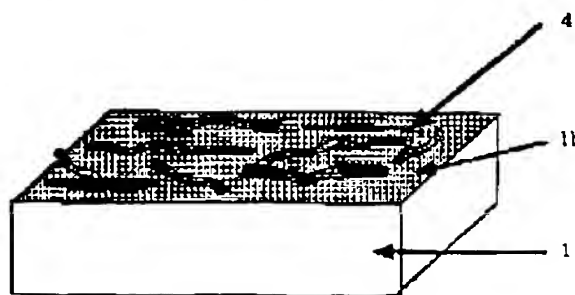
INT.CL. : C01B 31/02 D01F 9/127 G01N 37/00  
H01J 9/02

TITLE : PRODUCTION OF CARBON  
NANOTUBE



(a)

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(b)

**ABSTRACT :** PROBLEM TO BE SOLVED: To provide a method capable of growing a carbon nanotube uniform in characteristic and directional property at a relatively low temp., and unnecessitating a purifying treatment on a substrate.

**SOLUTION:** A growth starting area of the carbon nanotube 4 is previously formed on the surface 1b of the substrate 1 and a gaseous starting material containing a starting material for introducing carbon is introduced into a reaction vessel in a state in which the substrate is arranged in the reaction vessel, and the carbon nanotube is formed on the substrate by further generating a plasma by AC glow discharge in the reaction vessel, or the carbon nanotube is grown in narrow pores from growth nuclei at a bottom part of the narrow pores by providing the narrow pores in which the growth nuclei are arranged, and controlling the growth direction at the bottom of the substrate.

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